

REMARKS

Claims 1, 3-7, 11-32, and 35-39 are pending in the above-captioned application. Claims 15-32 were previously withdrawn. Claims 2, 8-10, 33, and 34 were previously cancelled. Claims 1, 4, 5, 7, 12, 14, and 36-38 have been amended. Claims 1, 7, 36, and 38 are in independent form.

Claim Rejections – 35 U.S.C. §112

2-3. Claims 4-6 and 12-14 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses the rejection.

The Examiner states that “[c]laims 4 and 12 each recites the torque lock having a cylindrical bore for receiving the torque lock portion of the tool shaft. However, this cylindrical bore would contradict with the independent claims 1 and 7, which claim the torque lock of the spindle and the torque lock portion of the tool shaft to be complementary non-circular cross-section.” In response, Applicant has deleted the reference to a “cylindrical” bore in claims 4 and 12. Thus, this rejection is moot.

Therefore, Applicant respectfully requests that the rejection of claims 4-6 and 12-14 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement be withdrawn.

Claim Rejections – 35 U.S.C. §102

4-5. Claims 1, 7, 36, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent 5,000,684 to Odrich (“the ’684 reference”). Applicant respectfully traverses the rejection.

The ’684 reference discloses a hand held apparatus 10 including a handle portion 12 connected to a head portion 14. The apparatus 10 encloses drive means for reciprocally rotating a chuck 18/94. A tool 20 is detachably connected to the chuck 18/94 and subjected to the reciprocal rotary motion of the chuck 18/94. Rotation is transmitted through the drive means to a chuck gear 42 which is fixed to the chuck 18/94. The tool 20 includes an engagement end 88

which is shaped for engagement into a mating socket 98 in the chuck 18/94, for co-rotation of the chuck 18/94 and the tool 20. In one embodiment, the engagement end 88 of the tool 20 is polygonal in shape and includes a projection 90 formed on one side which extends into a recess 92 in the socket 98.

Claim 1, as amended, includes the limitation "a spindle received in the axial bore of the drive for transferring torque generated by the drive to the rotatable tool when inserted into the handpiece, the spindle having an axial tool bore for receiving the tool shaft, the spindle being connected to the drive for torque transmission, the spindle including a tool retaining arrangement for releasably retaining the tool shaft in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, the spindle further including a torque lock independent of and axially spaced from the tool retaining arrangement and positioned concentrically in the axial tool bore of the spindle for concentrically receiving the torque lock portion of the tool shaft, the torque lock having a non-circular cross-section complementary to the torque lock portion of the tool shaft to prevent rotation of the torque lock portion of the tool shaft in the torque lock, while permitting axial insertion of the torque lock portion of the tool shaft into the torque lock, the torque lock being connected to the spindle for rotation therewith."

The '684 reference does not disclose a spindle received in an axial bore of a drive, the spindle having an axial tool bore for receiving a tool shaft, the spindle including a tool retaining arrangement for releasably retaining the tool shaft in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, the spindle further including a torque lock independent of and axially spaced from the tool retaining arrangement and positioned concentrically in the axial tool bore of the spindle for concentrically receiving a torque lock portion of the tool shaft. The Examiner contends that the chuck 18/94 in the '684 reference is equivalent to the spindle in the above-captioned application. Further, the Examiner contends that the recess 92 in the socket 98 of the chuck 18/94 is equivalent to the tool retaining arrangement in the above-captioned application. Further still, the Examiner contends that the polygonal cross-sectional shape of the socket 98 is equivalent to the torque lock in the above-captioned application. In the '684 reference, the polygonal cross-sectional shape of the socket 98 is not independent of and axially spaced apart

from the recess 92, as specifically required by amended claim 1 of the above-captioned application. As can be seen in Figure 11, the recess 92 is formed in one side of the socket 98 to receive the projection 90 on the tool 20. As such, the socket 98 is not independent of the recess 92. Rather, the socket 98 and the recess 92 are integrally formed together.

In addition, since the recess 92 is contained within the polygonal cross-sectional shape of the socket 98, the socket 98 is not axially spaced apart from the recess 92. Rather than being axially spaced apart, the socket 98 and the recess 92 coincide. More specifically, the socket 98 and recess 92 cannot be axially spaced apart if the recess 92 is formed within the socket 98.

In the above-captioned application, the torque lock being independent of and axially spaced apart from the tool retaining arrangement provides the advantage of allowing adaptation of the spindle to tools with torque lock portions of different cross-section by simply replacing the torque lock rather than having to replace both the torque lock 210 and the tool retaining arrangement, or the whole spindle. Thus, it is clear that the '684 reference does not disclose each and every element of amended claim 1 and claim 1 is therefore allowable.

Claim 7, as amended, includes the limitation "a spindle to be received in the axial bore of the drive, the spindle having an axial tool bore for receiving the burr shaft, the spindle being connectable with the drive for torque transmission, the spindle further including a burr retaining arrangement for releasably retaining the burr shaft in the axial tool bore against axial movement upon insertion of the burr shaft into the axial tool bore; and a torque lock independent of the burr retaining arrangement and positioned concentrically in the axial tool bore of the spindle for receiving the torque lock portion of the burr shaft, the torque lock having a non-circular cross-section complementary to the torque lock portion of the burr shaft to prevent rotation of the burr shaft in the torque lock while permitting axial insertion of the torque lock portion of the burr shaft into the torque lock, the torque lock being connected to the spindle for rotation therewith."

The '684 reference does not disclose a spindle having an axial tool bore for receiving a burr shaft, the spindle further including a burr retaining arrangement for releasably retaining the burr shaft in the axial tool bore against axial movement upon insertion of the burr shaft into the axial tool bore, and a torque lock independent of the burr retaining

arrangement and positioned concentrically in the axial tool bore of the spindle for receiving a torque lock portion of the burr shaft. The Examiner contends that the chuck 18/94 in the '684 reference is equivalent to the spindle in the above-captioned application. Further, the Examiner contends that the recess 92 in the socket 98 of the chuck 18/94 is equivalent to the tool retaining arrangement in the above-captioned application. Further still, the Examiner contends that the polygonal cross-sectional shape of the socket 98 is equivalent to the torque lock in the above-captioned application. In the '684 reference, the polygonal cross-sectional shape of the socket 98 is not independent of the recess 92, as specifically required by amended claim 7 of the above-captioned application. As can be seen in Figure 11, the recess 92 is formed in one side of the socket 98 to receive the projection 90 on the tool 20. As such, the socket 98 is not independent of the recess 92. Rather, the socket 98 and the recess 92 are integrally formed together.

In the above-captioned application, the torque lock being independent of the burr retaining arrangement provides the advantage of allowing adaptation of the spindle to tools with torque lock portions of different cross-section by simply replacing the torque lock rather than having to replace both the torque lock and the burr retaining arrangement, or the whole spindle. Thus, it is clear that the '684 reference does not disclose each and every element of amended claim 7 and claim 7 is therefore allowable.

Claim 36, as amended, includes the limitation "a spindle received in the axial bore of the drive for transferring torque generated by the drive to the rotatable tool when inserted into the handpiece, the spindle having an axial tool bore for receiving the tool shaft, the spindle being connected to the drive for torque transmission, the spindle including a tool retaining arrangement for releasably retaining the rotatable tool in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, wherein the tool retaining arrangement includes a pair of complementary, interengaging structures respectively incorporated into the spindle and the tool shaft, the spindle further including a torque lock independent of the tool retaining arrangement and positioned concentrically in the axial tool bore of the spindle for concentrically receiving the torque lock portion of the tool shaft, the torque lock having a non-circular cross-section complementary to the torque lock portion of the tool shaft to prevent rotation of the

torque lock portion of the tool shaft in the torque lock, while permitting axial insertion of the torque lock portion of the tool shaft into the torque lock, the torque lock being connected to the spindle for rotation therewith.”

The '684 reference does not disclose a spindle having an axial tool bore for receiving a tool shaft, the spindle including a tool retaining arrangement for releasably retaining the tool shaft in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, wherein the tool retaining arrangement includes a pair of complementary, interengaging structures respectively incorporated into the spindle and the tool shaft, the spindle further including a torque lock independent of the tool retaining arrangement and positioned concentrically in the axial tool bore of the spindle for concentrically receiving the torque lock portion of the tool shaft. The Examiner contends that the chuck 18/94 in the '684 reference is equivalent to the spindle in the above-captioned application. Further, the Examiner contends that the recess 92 in the socket 98 of the chuck 18/94 and a projection 90 on the tool 20 are equivalent to the tool retaining arrangement having a pair of complementary, interengaging structures respectively incorporated into the spindle and the tool shaft in the above-captioned application. Further still, the Examiner contends that the polygonal cross-sectional shape of the socket 98 is equivalent to the torque lock in the above-captioned application. In the '684 reference, the polygonal cross-sectional shape of the socket 98 is not independent of the recess 92, as specifically required by amended claim 36 of the above-captioned application. As can be seen in Figure 11, the recess 92 is formed in one side of the socket 98 to receive the projection 90 on the tool 20. As such, the socket 98 is not independent of the recess 92. Rather, the socket 98 and the recess 92 are integrally formed together.

In the above-captioned application, the torque lock being independent of the tool retaining arrangement provides the advantage of allowing adaptation of the spindle to tools with torque lock portions of different cross-section by simply replacing the torque lock rather than having to replace both the torque lock and the tool retaining arrangement, or the whole spindle. Thus, it is clear that the '684 reference does not disclose each and every element of amended claim 36 and claim 36 is therefore allowable.

Claim 38, as amended, includes the limitation “a drive unit for generating torque, the drive unit rotatably supported in the drive unit housing for rotation about the axis of rotation, the drive unit including a drive generating torque, a chuck for receiving the rotatable tool and for transferring torque generated by the drive to the rotatable tool when inserted into the handpiece, the chuck including a spindle having an axial tool bore for receiving the tool shaft, the spindle having a tool retaining arrangement for releasably and frictionally retaining the rotatable tool in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, the spindle further including a torque lock independent of the tool retaining arrangement and inserted concentrically into the axial tool bore of the spindle for concentrically receiving the torque lock portion of the tool shaft, the torque lock having a non-circular cross-section complementary to the torque lock portion of the tool shaft to prevent rotation of the torque lock portion of the tool shaft in the torque lock, while permitting axial insertion of the torque lock portion of the tool shaft into the torque lock, the torque lock being connected to the spindle for rotation therewith.”

The '684 reference does not disclose a spindle having an axial tool bore for receiving a tool shaft, the spindle having a tool retaining arrangement for releasably and frictionally retaining the tool shaft in the axial tool bore against axial movement upon insertion of the tool shaft into the axial tool bore, the spindle further including a torque lock independent of the tool retaining arrangement and inserted concentrically into the axial tool bore of the spindle for concentrically receiving a torque lock portion of the tool shaft. The Examiner contends that the chuck 18/94 in the '684 reference is equivalent to the spindle in the above-captioned application. Further, the Examiner contends that the recess 92 in the socket 98 of the chuck 18/94 is equivalent to the tool retaining arrangement in the above-captioned application. Further still, the Examiner contends that the polygonal cross-sectional shape of the socket 98 is equivalent to the torque lock in the above-captioned application. In the '684 reference, the polygonal cross-sectional shape of the socket 98 is not independent of the recess 92, as specifically required by amended claim 38 of the above-captioned application. As can be seen in Figure 11, the recess 92 is formed in one side of the socket 98 to receive the projection 90 on the tool 20. As such, the socket 98 is not independent of the recess 92. Rather, the socket 98 and the recess 92 are integrally formed together.

In addition, the polygonal cross-sectional shape of the socket 98, which the Examiner contends is equivalent to the torque lock, is not a separate element from the chuck 18/94, which the Examiner contends is equivalent to the spindle. The language "inserted concentrically into" in amended claim 38 makes it clear that the torque lock is a separate, distinct element from the spindle and the separate torque lock element is inserted concentrically into the axial tool bore of the spindle. In the '684 reference, the polygonal cross-sectional shape of the socket 98 is an integral part of the chuck 18/94 itself. Clearly, the polygonal cross-sectional shape of the socket 98 cannot be inserted concentrically into the chuck 18/94.

In the above-captioned application, the torque lock being independent of the tool retaining arrangement provides the advantage of allowing adaptation of the spindle to tools with torque lock portions of different cross-section by simply replacing the torque lock rather than having to replace both the torque lock and the tool retaining arrangement, or the whole spindle. Thus, it is clear that the '684 reference does not disclose each and every element of amended claim 38 and claim 38 is therefore allowable.

Therefore, Applicant respectfully requests that the rejection of claims 1, 7, 36, and 38 under 35 U.S.C. §102(b) as being anticipated by the '684 reference be withdrawn.

Claim Rejections – 35 USC §103

6-7. Claims 3-6, 11-14, and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the '684 reference. Applicant respectfully traverses the rejection.

Amended claim 1 is allowable as set forth above. Claims 3-6 and 35 depend from claim 1 and, as such, are construed to incorporate by reference all the limitations of the claim to which they refer, *see* 35 U.S.C. §112, fourth paragraph. Thus, claims 3-6 and 35 are allowable.

Amended claim 7 is allowable as set forth above. Claims 11-14 depend from claim 7 and, as such, are construed to incorporate by reference all the limitations of the claim to which they refer, *see* 35 U.S.C. §112, fourth paragraph. Thus, claims 11-14 are allowable.

Therefore, Applicant respectfully requests that the rejection of claims 3-6, 11-14, and 35 under 35 U.S.C. §103(a) as being unpatentable over the '684 reference be withdrawn.

8. Claims 37 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the '684 reference in view of U.S. Patent 5,924,865 to Quinn ("the '865 reference"). Applicant respectfully traverses the rejection.

Amended claims 1 and 36 are allowable as set forth above. Claim 37 depends from claim 1 or claim 36 and, as such, is construed to incorporate by reference all the limitations of the claim to which it refers, *see* 35 U.S.C. §112, fourth paragraph. Thus, claim 37 is allowable.

Amended claim 38 is allowable as set forth above. Claim 39 depends from claim 38 and, as such, is construed to incorporate by reference all the limitations of the claim to which it refers, *see* 35 U.S.C. §112, fourth paragraph. Thus, claim 39 is allowable.

Therefore, Applicant respectfully requests that the rejection of claims 37 and 39 under 35 U.S.C. §103(a) as being unpatentable over the '684 reference in view of the '865 reference be withdrawn.

It is respectfully submitted that this patent application is in condition for allowance, which allowance is respectfully solicited. If the Examiner has any questions regarding this amendment or the patent application, the Examiner is invited to contact the undersigned.

Respectfully submitted,


David J. Ford (Reg. No. 62,462)
Clark Hill PLC
500 Woodward Avenue, Suite 3500
Detroit, MI 48226-3435
(313) 965-8575

Date: May 4, 2009
Attorney Docket No: 25266-125053